Abstract

DNA sequences coding for enzymes capable of facilitating the synthesis of linear α -1,4 glucans in plants, fungi and microorganisms

The invention relates to DNA sequences coding for proteins having the enzymatic activity of an amylosucrase which allows the synthesis of linear α -1,4 glucans from the substrate sucrose by bacteria, fungi and plants or in cellfree systems.

The invention furthermore describes plasmids and bacteria containing these DNA sequences as well as processes for the production of plants and microorganisms capable of intracellularly or extracellularly expressing a polypeptide having amylosucrase activity.

The invention furthermore relates to the production of pure fructose using proteins exhibiting the enzymatic activity of amylosucrase.